

REMARKS

The Office Action dated July 9, 2007 has been received and carefully noted. The above amendments to the specification and claims, and the following remarks, are submitted as a full and complete response thereto.

By this Response, claims 1, 8, 9, and 11 have been amended to more particularly point out and distinctly claim the subject matter of the present invention. No new matter has been added and no new issues are raised which require further consideration and/or search. Support for the above amendments and new claim is provided in the Specification at page 7, lines 15-19, and page 27, line 14 to page 28, line 3. Accordingly, claims 1-12 are currently pending, of which claims 1, 8, 9, and 11 are independent claims.

In view of the above amendments and the following remarks, Applicants respectfully request reconsideration and timely withdrawal of the pending objections and rejections to the claims for the reasons discussed below.

Claim Rejections under 35 U.S.C. §102(b)/§103(a)

The Office Action rejected claim 8 under 35 U.S.C. §102(b) as allegedly anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Kotaro, *et al.* Japanese Publication 02-160525 ("Kotaro '525").

Claim 8 recites a molded product molded by use of a mold apparatus. The molded product includes a first mold unit, a second mold unit, a sprue bush disposed in one of the

first and second mold units and having a sprue, and a machining member disposed in the other of the first and second mold units in such a manner that the machining member can be advanced and retracted. The molded product also includes a bush disposed radially outward of the machining member to surround the machining member, and a support member disposed between the machining member and the bush. The support member extends rearward from a position at a front end portion of the machining member. The product is characterized by being molded through (a) charging a molding material into a cavity space via the sprue, (b) cooling the molding material so as to form a prototype of the molded product, and (c) advancing the machining member along an inner circumferential surface of the bush via the support member so as to perform a predetermined machining on the prototype of the molded product.

As will be discussed below, Kotaro '525 fails to disclose or suggest every claim feature recited in claim 8, and therefore fails to provide the advantages and features discussed above.

Kotaro '525 is directed to an injection mold and molding method to improve the optical and mechanical properties of a molded product and shorten a molding cycle by providing a temperature control device independent of the vicinity of a gate part closed by the outer circumference of a sprue. (Kotaro '525, Abstract)

The Office Action failed to substantiate a *prima facie* case of anticipation, and in the alternative, further failed to substantiate a *prima facie* case of obviousness. Kotaro '525 fails to disclose or suggest every claim limitation recited in claim 8. Specifically,

Kotaro '525 fails to disclose or suggest, at least, "a support member is disposed between the machining member and the bush, wherein *the support member extends rearward from a position at a front end portion of the machining member.*" (*emphasis added*)

Further, the Office Action failed to provide any citations from within Kotaro '525 to support its rejections under 35 U.S.C. §102(b) and/or provide any arguments to support its rejections under 35 U.S.C. §103(a) of Applicants' amended claim 8, provided in the Response filed April 9, 2007 (See page 5, paragraphs 11-13).

Rather, the Office Action merely concluded that "the product of JP '525 does not appear to have any structural characteristics different from that claimed. See MPEP 2113 (See Office Action on page 3, paragraph 6). The *Response to Arguments* further failed to address Applicants' amendments and arguments for amended claim 8, as provided in the Response filed April 9, 2007 (See page 5, paragraphs 11-13).

In rejecting the claims, the Office Action is charged with citing the best reference(s) at his or her command, and further instructed to describe or cite the particular part of the reference relied upon in support of the claim rejection (See 37 C.F.R. §1.104(c)(2)). The Office failed to satisfy this requirement.

Accordingly, Applicants respectfully submit that Kotaro '525 fails to disclose or suggest every claim feature recited in claim 8 as discussed above. Therefore, Applicants respectfully request withdrawal of the rejection of claim 8 under 35 U.S.C. §102(e), or in the alternative, under 35 U.S.C. §103(a), and respectfully submit that claim 8 is now in condition for allowance.

Claim Rejections under 35 U.S.C. §102(e) & 35 U.S.C. §103(a)

The Office Action rejected claims 1-6 and 8-12 under 35 U.S.C. §102(e) as allegedly being anticipated by Toshihiro, Japanese Publication 2003-165146 (“Toshihiro ‘146”). The Office Action further rejected claims 1-6 and 8-12 under 35 U.S.C. §103(a) as allegedly being unpatentable as obvious over Toshihiro ‘146.

Claim 1, upon which claims 2-7 and 10 are dependent, recites a mold apparatus. The mold apparatus includes a first mold unit, a second mold unit, and a sprue bush disposed in one of the first and second mold units and having a sprue for charging a molding material into a cavity space. The mold apparatus also includes a machining member disposed in the other of the first and second mold units in such a manner that the machining member can be advanced and retracted. The machining member performs a predetermined machining for a prototype of a molded product when the machining member is advanced. The mold apparatus also includes a bush disposed radially outward of the machining member to surround the machining member and having a flow passage which is formed in a front end portion thereof and through which a temperature control medium flows, and a support member disposed between the machining member and bush. The support member extends rearward from a position at a front end portion of the machining member.

Claim 8 was presented above.

Claim 9 recites a method of molding a product in a mold apparatus. The mold apparatus includes a first mold unit, a second mold unit, a sprue bush disposed in one of the first and second mold units and having a sprue, and a machining member disposed in the other of the first and second mold units in such a manner that the machining member can be advanced and retracted. The mold apparatus also includes a bush disposed radially outward of the machining member to surround the machining member, and a support member disposed between the machining member and the bush. The support member extends rearward from a position at a front end portion of the machining member. The method includes charging a molding material into the cavity space via the sprue, cooling the molding material so as to form a prototype of the molded product, and advancing the machining member along an inner circumferential surface of the bush via the support member so as to perform a predetermined machining on the prototype of the molded product.

Claim 11, upon which claim 12 is dependent, recites a bush for a disc-molding mold. The bush includes a first mold unit, a second mold unit, a sprue bush disposed in one of the first and second mold units and having a sprue for charging the molding material into the cavity space, and a machining member disposed in the other of the first and second mold units in such a manner that the machining member can be advanced and retracted. The machining member performs a predetermined machining for a prototype of a molded product when the machining member is advanced. The bush, having a cylindrical shape, surrounds the machining member radially outward and a support

member which extends rearward from a position at a front end portion of the machining member so as to support the machining member. A discharge passage for discharging a lubricant used for lubricating the support member is formed in the rear end portion of the machining member.

As will be discussed below, Toshihiro '146 fails to disclose or suggest every claim feature recited in claim 1-6 and 8-12, and therefore fails to provide the advantages and features discussed above.

Toshihiro '146 is directed to a mold device configured to increase a cooling capacity on the side of a movable mold in a mold device for molding in which a gate cut sleeve is fitted to freely slide in relation to the movable mold through a cylinder for guiding a slide (Toshihiro '146, Abstract).

Toshihiro '146 fails to disclose or suggest every claim feature recited in claim 1. Specifically, Toshihiro '146 fails to disclose or suggest, at least, “(f) a support member is disposed between the machining member and bush, wherein the support member extends rearward from a position *at a front end portion of the machining member*” (*emphasis added*).

Rather, Toshihiro '146 discloses a gate cut sleeve 29 disposed in a sliding guide tube 27 of a stationary mold 1 via a bearing 32, whereby the bearing 32 extends from a position near a central portion of the sliding guide tube 27 (Toshihiro '146, col. 4, lines 3-6 and See Figure 3). Accordingly, Toshihiro '146 fails to disclose or suggest every claim feature recited in claim 1, and similarly in claims 8, 9, and 11.

Further, in response to Applicants' amendments and arguments filed on June 9, 2007, the Office Action presented two characterizations of Toshihiro '146 to reject the subject matter of claims 1, 8, 9, and 11, and the claims that depend therefrom:

(A) First, referring to Figures 1 and 3, the Office Action alleged that cylinder 27 (bush) surrounds the gate cut sleeve 29 (machining member) and has a flow passage (28) in a front end portion. The Office Action further alleged that Figure 1 shows the radial dimension of the flow passage (28) of the sprue bush is greater than an inner diameter of a supply passage for supplying temperature control medium to the flow passage of the sprue bush. A support member (32) extends rearward from a position near the flow passage formed in the front end portion of the bush. The supply passage (28D) for supplying the temperature control medium to the flow passage of the bush is formed along the support member (32) as shown in Figure 3.

In this characterization of Toshihiro '146, the Office Action asserted that support member 32 extends rearward from a position near the flow passage formed in the front end portion of the bush. (See Office Action on pages 3-4, paragraphs 7-8) Therefore, the Office Action failed to demonstrate that Toshihiro '146 discloses or suggests "the support member extends rearward from a position *at a front end portion of the machining member*" as recited in claim 1, and similarly in claims 8, 9, and 11 (*emphasis added*).

(B) Second, in an alternative view, the Office Action alleged that the ejector pin 30 is equivalent to the machining member, the cylinder 27 is equivalent to the bush, and the gate cut sleeve 29 is equivalent to the support member disposed between the ejector

pin 30 and the cylinder 27, whereby the support member 29 extends rearward from a position at the front end portion of the machining member 30. (See Office Action on pages 3-4, paragraphs 7-8) The specification, nor the figures, of Toshihiro '146 support this conclusion. Further, the Office Action failed to provide support from within Toshihiro '146, the specification or the figures, to substantiate such a conclusion; rather, the Office Action presented a hindsight argument to reject the subject matter of the claimed invention.

In the *Response to Arguments*, the Office Action further alleged that the upper end of bearing 32 is at a location about half the distance from both the gate cut sleeve 29 cavity end and the center of the gate cut sleeve 29, asserting that this location is considered to be within the meaning of "near" since the bearing 32 upper end is located near the cavity side of the center of the gate cut sleeve 29. (See Office Action on page 5, paragraph 13) In view of the amendments to claim 1, this argument fails to demonstrate that Toshihiro '146 discloses or suggests every claim limitation recited in claim 1, and similarly in claims 8, 9, and 11.

Claims 2-6 and 10 depend from claim 1. Claim 12 depends from claim 11. Accordingly, claims 2-6, 10, and 12 should be allowable for at least their dependency upon an allowable base claim, and for the limitations recited therein.

Therefore, Applicants respectfully request withdrawal of the rejections of claims 1-6 and 8-12 under 35 U.S.C. §§102(e) and 103(a), and respectfully submit that claims 1, 8, 9, and 11, and the claims that depend therefrom, are now in condition for allowance.

Allowable Subject Matter

The Office Action indicated that claim 7 would be allowable if rewritten to overcome the rejection under 35 U.S.C. §112, second paragraph, and to include all of the limitations of the base claim and any intervening claims.

As previously noted, Toshihiro '146 fails to disclose or suggest every claim feature recited in claim 1. Claim 7 depends from claim 1. Accordingly, claim 7 should be allowable for at least its dependency upon an allowable base claim, and for the specific limitations recited therein.

Therefore, Applicants respectfully submit that claim 7 is in condition for allowance.

CONCLUSION

In conclusion, Applicants respectfully submit that Kotaro '525 and Toshihiro '146 fail to disclose or suggest every claim feature recited in claims 1-12. The distinctions previously noted are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-12 be allowed, and this present application passed to issuance.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by

telephone, Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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